

WHAT IS CLAIMED IS:

1. A genetically engineered mammalian cell that has been  
5 mutated by a process comprising the insertion of a recombinantly  
manipulated polynucleotide sequence into a gene in said  
genetically engineered mammalian cell wherein said gene is  
identifiable as corresponding to at least one of SEQ ID NOS: 1-  
341.
- 10 2. The genetically engineered mammalian cell of Claim 1,  
wherein said cell is murine.
3. A cell according to Claim 2, wherein said cell is an  
15 embryonic stem cell.
4. The genetically engineered mammalian cell of Claim 1,  
wherein said polynucleotide sequence is present on a viral  
vector.
- 20 5. A cell according to Claim 4, wherein said viral vector  
is a retroviral vector.
6. A cell according to Claim 4, wherein said viral vector  
25 additionally comprises regions of targeting DNA that facilitate  
gene targeting by homologous recombination.
7. An isolated murine embryonic stem cell line comprising  
an engineered retroviral gene trap vector in at least one gene  
30 comprising a polynucleotide sequence first disclosed in one of  
SEQ ID NOS: 1-341.